STATE OF MARYLAND

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of the Application of Delmarva)
Power and Light Company for an)
Increase in Its Retail Rates for the)
Distribution of Electric Energy)

Case No. 9192

DIRECT TESTIMONY OF

JONATHAN WALLACH

ON BEHALF OF

THE OFFICE OF PEOPLE'S COUNSEL

Resource Insight, Inc.

AUGUST 24, 2009

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Exhibit JFW-1	Professional Qualifications of Jonathan F. Wallach
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Attachment 1	Delmarva Responses to Data Requests

1 I. Introduction and Summary

2 Q: Please state your name, occupation, and business address.

A: I am Jonathan F. Wallach. I am Vice President of Resource Insight, Inc., 5
Water Street, Arlington, Massachusetts.

5 Q: Please summarize your professional education and experience.

- A: I have worked as a consultant to the electric-power industry since 1981. From
 1981 to 1986, I was a research associate at Energy Systems Research Group. In
 1987 and 1988, I was an independent consultant. From 1989 to 1990, I was a
 senior analyst at Komanoff Energy Associates. I have been in my current
 position at Resource Insight since September of 1990.
- Over the last twenty-eight years, I have advised clients on a wide range of economic, planning, and policy issues including: electric-utility restructuring; wholesale-power market design and operations; transmission pricing and policy; market valuation of generating assets and purchase contracts; powerprocurement strategies; integrated resource planning; cost allocation and rate design; and energy-efficiency program design and planning.
- 17 My resume is attached as Exhibit JFW-1.
- 18 Q: On whose behalf are you testifying?
- 19 A: I am testifying on behalf of the Office of People's Counsel.

20 Q: What is the purpose of your testimony?

A: On May 6, 2009, Delmarva Power and Light Company ("Delmarva"; "the
Company") filed an application for an increase in its distribution rates, along
with supporting testimony. This testimony addresses three aspects of the
Company's filing: (1) the proposed allocation to the residential class of the

requested revenue increase; (2) the Customer Class Cost Of Service Study
 ("COSS") that forms the basis for the proposed revenue allocation; and (3) the
 proposed residential rate design. These three elements are supported in the pre filed testimony by Company witnesses Joseph F. Janocha and Elliot P. Tanos.
 People's Counsel is also sponsoring testimony by Mr. David Effron

6 regarding revenue requirements and Mr. Charles King regarding rate of return.

7

Q: Please summarize your conclusions and recommendations.

8 A: The Company's proposal for allocating the requested revenue increase to 9 customer classes, in combination with its proposal to dramatically increase the residential customer charge, unduly and unreasonably burdens consumers, 10 11 particularly low-usage customers. In this time of economic distress, the Company should be minimizing residential rate increases to the greatest extent 12 feasible. Instead, the Company's proposal would allocate to residential 13 ratepayers more of the requested revenue increase than is necessary to achieve 14 the requested rate of return. The Company's proposal then further burdens 15 smaller consumers by proposing to shift costs from energy charges to the 16 17 customer charge.

18

I recommend the following actions to reduce the harm to consumers:

The Commission should reject the Company's proposed approach for
 allocating to the residential class any increase in revenues that is ultimately
 approved by the Commission. Instead, the Company should be allowed to
 allocate only as much of the approved revenue increase required to achieve
 the authorized rate of return.

The Company's proposal to increase the residential customer charge by
 25 25% should be rejected. Instead, the customer charge should be increased

- in proportion to the overall revenue increase allocated to the residential
 class.
- The Company's proposed method for reducing the declining-block 3 • structure in winter rates should be modified. While there is merit to the 4 concept of reducing the difference between initial and trailing blocks, the 5 proposed approach unreasonably reduces the summer-winter differential in 6 7 energy charges for large residential customers. Instead, the revenue 8 increase remaining after the customer charge is adjusted as recommended 9 above should be applied in a manner that both reduces the declining-block structure in the winter and provides for a summer-winter differential. 10

Q: Have you prepared an exhibit that illustrates your recommendations
 regarding allocation of the revenue increase and residential rate design?

A: Yes. Exhibit JFW-2 provides an illustrative design for the Residential ("R")
rate class, based on the Company's requested rate of return and revenue
increase.¹ The first page of Exhibit JFW-2 shows the allocation of the revenue
increase to the residential class that brings the residential rate of return up to
requested levels.² As indicated on this first page, this allocation results in a
10.3% increase in residential revenues.

19The second page of Exhibit JFW-2 illustrates a rate design for the R class20that: (1) increases the customer charge by 10.3%, commensurate with the

¹This exhibit was developed by modifying electronic-spreadsheet versions of Exhibit JFJ-1, which were provided in response to OPC Data Request No. 5, Question No. 15.

²For simplicity, this illustrative calculation assumes that all non-residential distribution rate classes are also brought up to the requested rate of return and eliminates the proposed reduction to the General Service Transmission rate. However, the requested revenue increase could be distributed among the non-residential classes in other ways without affecting the allocation to the residential class.

residential revenue increase; (2) increases the winter initial-block energy rate by
10.3% (relative to the current base rate, excluding the BSA surcharge); and (3)
recovers the remaining revenue increase with proportional increases to the
summer energy rate and the winter tail-block energy rate. The changes to the
energy rates increase the differential between summer and average winter rates
and narrow the gap between the initial and tail blocks in the winter.

7 II. Cost Allocation

8 Q: What is the purpose of the cost-allocation process?

9 A: The cost-allocation process assigns the Company's total Maryland-jurisdictional
10 revenue requirement to the various customer and rate classes. The process is
11 generally driven by some concept of fairness. It is a generally accepted principle
12 that allocation based on cost causation results in an equitable sharing of costs.

13 Q: What are the results of Delmarva's Cost of Service Study?

A: The COSS indicates that for the twelve months ending December 31, 2008, the
 residential class was paying 105% of the Company's average rate of return.³

16 Q: On which portions of the cost-allocation process do you have comments?

A: I have comments on the allocation of the proposed revenue increase (which is
based in part on the Cost of Service Study), and on two aspects of the COSS

19 itself. I will discuss each of these in turn.

³Direct Testimony of Joseph F. Janocha, Case No. 9192, May 6, 2009, Schedule JFJ-1, page 1.

1 A. Allocation of the Revenue Increase

Q: How does the Company propose to use its Customer Class Cost of Service Study to allocate its requested rate increase among rate classes?

A: The Company relies on the COSS, specifically the allocation of test-year system
costs and revenues to individual rate classes, to determine the rate of return
achieved by each rate class for the test year. These results, in turn, are relied on
to allocate the requested system revenue increase to individual rate classes in
order to reduce the difference between the achieved rate of return for each class
and the requested rate of return for the Company as a whole.

According to Mr. Janocha, the Company proposes to allocate the revenue 10 increase to all classes other than Telecommunications Network Service such that 11 the difference between the current and the requested rate of return is reduced by 12 70%. For the TN class, the Company proposes to eliminate the difference 13 between the current and requested rate of return. Under the Company's 14 proposal, revenues from the residential class would increase by 10.8% 15 (compared to a system average increase of 12.4%.)⁴ Although residential 16 17 revenues would increase by a smaller percentage than total revenues, the residential class would continue to pay in excess of the Company's average rate 18 of return. In other words, the Company proposes to allocate to residential 19 20 customers more of the requested revenue increase than necessary to achieve the requested rate of return. 21

⁴Janocha Direct, Schedule JFJ-1, page 1.

Q: Would average rates for the residential class also increase by 10.8% under the Company's proposal?

A: No. Average base rates for the residential class would increase by about 18%
under the Company's proposal.

The revenue and the base-rate increases are different in this case due to the 5 6 dramatic decline in retail sales between the 2006 and 2008 test year and the 7 offsetting impact of the Bill Stabilization Adjustment ("BSA") mechanism. 8 Current residential rates were designed to recover the revenue amount approved 9 in Case No. 9093, using billing determinants for the 2006 test year. Since 2006, although actual sales have dropped far below 2006 test-year levels, the BSA 10 11 mechanism has ensured that the Company continues to recover revenues equivalent to the approved amount. The 10.8% revenue increase requested by 12 13 the Company represents the increase over the revenue amount approved in Case 14 No. 9093 required to recover the Company's assessment in this proceeding of 2008 test-year revenue requirements (as allocated to the residential class.) In 15 16 other words, the 10.8% revenue increase represents the increase in residential 17 revenue requirements from the 2006 test year to the Company's estimate for the 18 2008 test year.

19 Not only have costs increased by 10.8% from 2006 to 2008, by the 20 Company's estimate, but the retail sales that generate revenues to cover these costs have declined between 2006 and 2008. Revenues for the 2008 test year 21 (the product of 2008 test-year billing determinants and current base rates) are 22 less than the amount approved in Case No. 9093 (the product of 2006 test-year 23 24 billing determinants and current base rates), because 2008 test-year billing determinants are substantially lower than 2006 test-year levels. The Company is 25 therefore requesting an 18% increase in current base rates in order to bring the 26

1 residential rate up to a level that, when applied to 2008 test-year billing determinants, generates revenues sufficient to recover both the 10.8% increase 2 in allocated revenue requirements and the loss of revenues (relative to the 3 amount approved in Case No. 9093) associated with the decline in retail sales 4 between the 2006 and 2008 test years. The Company has been recovering these 5 sales-related revenue losses through an energy surcharge pursuant to the BSA. 6 7 The 18% increase thus effectively folds the BSA surcharge recovery of the 8 sales-related deficiency into base rates.

9 Q: Do you recommend any changes to the Company's proposal for allocating
10 its overall revenue request to the residential class?

A: Yes. Residential revenues should be increased only by that amount necessary to achieve the rate of return authorized by the Commission in this proceeding. The Company has not adequately supported its proposed allocation of the overall revenue increase, specifically its proposal to over-allocate the revenue increase to residential customers. During these dire economic times, it is unreasonable to expect consumers to subsidize other customer classes by bearing more than their fair share of the revenue increase.

Furthermore, as discussed below, the Cost of Service Study relied on as the 18 basis for allocating the revenue increase may overstate the residential class's 19 20 share of costs. If that is the case, then the extent to which the residential class is under-earning relative to the requested rate of return, and the increase necessary 21 to bring the residential class to the requested rate of return, would be less than 22 indicated by the Company's COSS. In other words, consumers may still be 23 paying more than their equitable share, even if the residential class is allocated 24 the share of the revenue increase indicated by the Company's Cost of Service 25 Study as required to achieve the authorized rate of return. 26

I therefore recommend that the residential class be allocated only as much of the overall revenue increase approved by the Commission in this proceeding as is necessary to achieve the approved rate of return. In addition, I recommend that the Commission direct the Company to address the problems in its Customer Class Cost of Service Study identified in the following section of my testimony.

7 B. Delmarva's Cost of Service Study

8 Q: How does Delmarva allocate distribution plant?

9 A: According to Mr. Tanos, the COSS allocates distribution plant as follows:

- Primary distribution is assigned on the basis of the class maximum diversified demand ("Class MDD"), that is, the maximum hourly load for the class as a whole.
- Services are allocated on the sum across customers in a class of maximum
 customer demands ("Customer NCP"), i.e., the sum of each customer's
 individual maximum hourly demand, regardless of which hour of the year
 each customer's maximum demand occurs.⁵
- Line transformers are assigned to small secondary customers based on a
 simple average of Class MDD and Customer NCP, but to large secondary
 customers based on Customer NCP. Use of this allocator recognizes that

⁵Customer NCP will almost always exceed Class MDD because of load diversity, i.e., the fact that some customers in a class will reach maximum demand at different times than other customers. Customer NCP simply sums the individual maximum demands across all customers in the class, regardless of which hour the individual maximum demand occurs. In contrast, Class MDD is the load in the one hour when the sum of individual customer hourly demands is at its maximum.

- small customers share transformers while each large customer requires its
 own transformer or set of transformers.
- Secondary lines (overhead and underground) are assigned to small
 secondary customers based on a simple average of Class MDD and
 Customer NCP. Large general-service secondary customers are not
 assigned any secondary lines, assuming that all large customers are
 directly served from the transformer.

8 Q: Do these allocators reasonably reflect cost causation?

- 9 A: These allocators are generally reasonable. However, I have identified two
 10 potential issues with the Company's allocation assumptions that may tend to
 11 overstate the allocation of costs to the residential class:
- The allocation of line transformers based on a simple average of Class
 MDD and Customer NCP may understate the diversity of load on these
 facilities.
- Delmarva's allocation of services based on Customer NCP (which implies zero diversity in customers' loads) does not account for the sharing by several residential customers of a single service line to a multi-family building.
- Both of these issues arise from a concern that the Company may be understating residential load diversity in its specification of residential allocators. If load diversity is understated, the COSS will overstate the residential-class contribution to distribution costs and thus over-allocate such costs to the residential class.

Q: How does load diversity affect the sizing of transmission and distribution ("T&D") plant?

A: The diversity of demand among a group of customers results in a group peak
demand that is lower than the sum of customers' individual maximum demands.
In other words, since customers reach their individual peak demands on
different days and hours, their loads at the single hour when a distribution
facility reaches its peak will be less than the sum of the individual customers'
maximum demands. In general, utilities size T&D plant to meet the group peak,
not the sum of customers' individual maximum demands.

10 The load diversity on a given piece of distribution equipment depends on 11 the number and type of customers served by that equipment. The farther 12 downstream the distribution equipment, the fewer the customers served, and the 13 lower the load diversity.

Load diversity is frequently reported as a coincidence factor, the ratio of the peak of a group of customers to the sum of their maximum demands. In other words, the coincidence factor measures the percentage of the customers' maximum demand that occurs at the hour of the group peak.

18 Q: Do Delmarva's demand allocators reflect load diversity on distribution 19 plant?

A: Yes. For example, at the primary level, the Company's analysis assumes a residential load coincidence factor of 33% when it assigns this plant based on the Class MDD factor. In other words, it assumes that the peak of a group of residential customers is 33% of the sum of their maximum annual demands. At the farthest end of the distribution system, at the service drop, Delmarva assumes no diversity of load (or a coincidence factor of 100%) when it allocates this plant according to the sum of individual customers' maximum demands.

- 1 The diversity reflected in Delmarva's demand allocators is shown in the 2 following table of coincidence factors:⁶
- 3

Allocator	Total Maryland	Resid	GS @ Secondary	GS @ Primary	Street Light	
Class MDD	43%	33%	61%	78%	100%	
50/50 MDD-NCP	71%	66%	81%	89%	100%	
Customer NCP	100%	100%	100%	100%	100%	
Source: Schedule EPT-5, p. 18-2.						

4 5

Q: Why would under-estimating load diversity overstate the residential class's share of costs?

There tends to be more load diversity on the distribution equipment serving 8 A: 9 small customers, because each piece of equipment typically can serve more small customers than large customers. For example, according to PEPCo's 1985 10 residential underground distribution guidelines, a 167 kVA transformer can 11 serve 41 residential customers using gas heat and $3\frac{1}{2}$ hp air conditioning, with a 12 total non-coincident demand of 492 kVA.7 But that same transformer could only 13 14 serve a single commercial customer with a demand of around 167 kVA. There is no diversity in the large-customer load on the transformer, while the diversity of 15 the residential loads reduces the peak on the transformer by 66% compared to 16 the individual customer peaks. The greater the number of customers on a 17 particular component, the greater the variation in loads and load shapes (that is, 18

⁶ The 50/50 MDD-NCP coincidence factor is calculated as the simple average of the MDD and the NCP coincidence factors.

⁷*Underground Residential Distribution: Loading & Cable Parameters* (DR OPC-RD-1-36, Attachment A provided in Case No. 8466), Tables III and IX.

1	load diversity), the lower the contribution per customer to the group peak, and
2	the lower the cost per customer.

Q: Has the Company provided any load diversity studies to support its specification of allocators?

- A: No. While it recognizes that allocators should reflect load diversity on the
 distribution facilities, the Company has not conducted a study of load diversity
 on the Delmarva system.⁸
- 8 The Company should undertake such an analysis in order to ensure that its 9 allocators reasonably reflect the impact of load diversity on distribution costs.
- 10 1. Line Transformers

Q: What does the Company assume for residential load diversity on line transformers?

- A: As noted in the table above, the Company assumes a residential coincidence
 factor of about 66% when it allocates line-transformer costs using the simple
 average of Class MDD and Customer NCP.
- Q: Has Delmarva provided any analyses to support its use of a 50/50 weighting
 of Class MDD and Customer NCP, with its implied coincidence factor of
 66%?
- A: No. Instead, in response to discovery, Mr. Tanos offers a general rationale for
 using a simple average of Class MDD and Customer NCP:

⁸See the responses to OPC Data Request No. 5, Questions No. 9 and 11. Copies of these and all other responses cited herein are attached.

1 Distribution line transformers are allocated using the average of the two 2 demand levels to recognize that transformers may serve multiple customers 3 so that the diversity of load will impact the sizing of the transformer; while 4 other transformers serve a single customer so no load diversity is 5 considered in sizing the transformer.⁹

Lacking any analyses by the Company, I have prepared an illustrative
 calculation of load diversity on line transformers using the average of Delmarva
 customers per secondary transformer and PEPCo's estimates of residential load
 coincidence by number of houses and end use included in its 1985 underground
 distribution guidelines. This calculation illustrates how the 50/50 weighting may
 understate diversity on line transformers.

There were 59,097 secondary transformers in Delmarva's Maryland jurisdiction as of year-end 2008, and 201,954 customers for the 2008 test year.¹⁰ Assuming that no secondary transformers are attributable to primary or streetlighting customers, and that secondary general-service customers average one transformer per customer, the remaining transformers would each serve an average of about 5.5 residential customers.

Assuming five residential customers per transformer, PEPCo's 1985 underground distribution guidelines show less than 66% load coincidence for all but the largest electric air-conditioning or heating customers, even when all the customers on the transformer are assumed to have the same-sized air conditioning or heating equipment. Based on Table III of PEPCo's guidelines, as indicated in the following table, a group of five houses each with 2½ hp air conditioning, for example, would have a coincidence factor of 55%:¹¹

⁹Response to OPC Data Request No. 5, Question No. 9.

¹⁰Response to OPC Data Request No. 9, Question No. 1 and Schedule EPT-5, page 19-1.

¹¹The coincidence factors in this and the following table are calculated as the ratio of diversified to undiversified kVA demand for five houses. Diversifed kVA demand for five houses is

	Air Conditioning (hp)								
	None	1½	2	2½	3	3½	4	5	7½
1 House	7	9	10	11	11	12	13	15	19
5 Houses diversified kVA	19	22	25	30	33	37	40	48	66
Coincidence Factor	54%	49%	50%	55%	60%	62%	62%	64%	69%

Likewise, as shown in the following table, based on Table IV of PEPCo's guidelines, a group of five houses each with 12.5 kW of electric heating, would have a coincidence factor of 61%:

_	Electric Furnace (kW)							
	5	7.5	10	12.5	15	20	25	30
1 House	10	15	14	17	18	22	27	31
5 Houses diversified kVA	32	40	44	52	56	80	92	124
Coincidence Factor	64%	53%	63%	61%	62%	73%	68%	80%

If diversity among different types of residential customers were also taken
into account, the coincidence factors would be even lower than calculated in these
tables. For example, a single transformer may serve some homes with electric heat
that peak in the winter, and some with fossil heat that peak in the summer.

8 2. Sharing of Services

9 Q: To what extent is load diversity reflected in the Company's allocator for 10 services?

A: The Company uses Customer NCP to allocate services. Because Customer NCP
is derived as the sum of individual customers' maximum demand, it reflects
zero diversity of customer load.

provided in the tables. Undiversifed KVa demand is calculated as five times the kVA demand for a single home, as shown in the tables.

Q: Is it reasonable to assume zero diversity of customer load for the allocation of services?

A: No. Such an assumption fails to account for the sharing of services in multifamily buildings. Where services are shared, the load on the equipment is less
than the sum of individual customer's maximum demand. In other words,
load diversity is greater than zero for these multi-family buildings and, in
turn, greater than zero on average for the residential class as a whole.

8 Q: Have you estimated what the impact of shared services would be on the 9 residential services allocator?

10 A: I am unable to estimate at this time the impact of shared services, since the 11 Company has not provided data on load diversity required for such a 12 calculation. In addition, Delmarva is unable to provide other necessary 13 information, such as data on the mix of housing types and the number of 14 customers per service in its Maryland jurisdiction.¹²

However, this impact may be significant, since a substantial portion of
housing in Delmarva's service territory is multi-family. According to the 2000
Census of Housing, in the counties that Delmarva serves, 18.3% of the
customers are in multi-family housing with 2 to 9 units, and 11.4% in multifamily housing with more than 9 units.¹³

¹²See the responses to OPC Data Request No. 5, Question Nos. 6 and 7.

¹³The Census figures include housing in the Choptank service territory. Since Choptank is likely to serve fewer multi-family dwellings, the percentage of multi-family units in Delmarva's territory is probably understated.

1

Q: Would similar adjustments apply to other classes?

A: No. Other than multi-family residential customers on the residential rate,
 relatively few customers are likely to share services.¹⁴

4 III. Rate Design

5 Q: What are your concerns with regard to Delmarva's residential rate design 6 proposals?

A: I have identified two issues with regard to Delmarva's proposed rate design for
the residential class. First, the Company's proposal for a 25% increase in the
monthly customer charge disproportionately and unreasonably shifts the burden
for the revenue increase onto low-usage customers. Second, the Company's
proposed method for reducing the declining-block structure in winter rates
inappropriately reduces the summer-winter differential in energy charges for
large residential customers.

14 A. Residential Customer Charge

Q: What is Delmarva's proposal with regard to the residential customer charge?

- A: The Company proposes to increase the customer charge by 25%. According to
 Mr. Janocha, this increase will result in a customer charge that recovers 43% of
- 19 residential revenue requirements identified as customer-related in the COSS.¹⁵

¹⁴In some cases, small commercial customers in a strip mall or office building will share a service.

¹⁵Janocha Direct, p. 8.

1

Q: Is the proposed increase reasonable?

- A: No. The Company's proposal unreasonably harms small residential customers in
 the following respects:
- The proposed increase would inappropriately shift recovery of sales-related
 revenue losses from the volumetric BSA energy surcharge to a fixed
 customer charge.
- The large increase disproportionately affects small customers' bills.
 Delmarva's approach would require that the smallest customers (with the least-expensive distribution equipment) pay the average of customer costs attributable to all sizes of residential customers. Using an average cost per customer does not take into account the effect of customer size on cost and results in the subsidy of large customers by small customers within the class.
- The customer charge inappropriately includes costs that the COSS
 classifies as customer-related, but allocates as load-related.
- The large increase results in a disruptive change to small customers' bills. The Company itself recognizes the need for gradual changes in the customer charge in order to temper intra-class shifts.¹⁶ However, a 25% increase in the customer charge is not a gradual change for a low-usage customer, where the customer charge may represent 20% of the monthly bill.

¹⁶Janocha Direct, p. 8.

Q: How would the Company's proposal shift recovery of sales-related revenue
 losses from the volumetric BSA energy surcharge to a fixed customer
 charge?

A: As discussed above in Section II.A, if not for the drop in sales from 2006 testyear levels, residential customer and energy charges would need to increase by
10.8% to recover the Company's requested revenue amount. Moreover, the
revenue losses associated with this sales decline are currently being recovered
through a volumetric energy surcharge under the BSA. Thus, an increase in the
customer charge greater than 10.8% effectively shifts recovery of sales-related
revenue losses from a volumetric energy surcharge to a fixed customer charge.

Q: Why is it unreasonable to recover sales-related revenue losses through the customer charge?

It is unreasonable because it effectively allocates to small customers a larger 13 A: 14 share of the revenue losses than is their responsibility. The revenue losses 15 recovered through the BSA surcharge were due solely to a decline in energy sales.¹⁷ As such, it is likely that customers contributed to revenue losses in 16 proportion to usage. It is therefore reasonable to allocate such revenue losses on 17 18 energy, as is the case when such losses are recovered through the BSA energy 19 surcharge. In contrast, recovering revenue losses through a fixed customer 20 charge effectively allocates a fixed amount of revenue losses per customer, 21 regardless of customer usage. As a result, smaller customers are allocated the 22 same share of revenue losses as larger customers, even though smaller customers were likely responsible for a smaller share of such costs. 23

¹⁷In fact, customer count increased from 2006 to 2008, resulting in revenue growth from the customer charge.

1 2

Q:

Which costs typically classified as customer-related in cost of service studies should not be included in the calculation of the customer charge?

3 A number of customer-classified costs vary with the size of the customer (in A: revenues, sales, or demand), and therefore, should be recovered in part through 4 the commodity charge. For example, the service drop for the average small 5 residential customer is likely to be smaller than for the average large customer. 6 7 Large residential customers are likely to be single-family homes, each using a 8 fairly long service drop. Small customers are more likely to share services in 9 multi-family housing or townhouses, or perhaps in row houses with individual, 10 but short, service lines. Other costs that are classified as customer-related will 11 also vary with the customer's use. For example, uncollectible accounts and 12 collection expense are likely to be larger for large customers than for small 13 customers, since the large customers have larger bills to become uncollectible.

14 Q: What costs does the COSS classify as customer-related, but allocate on 15 load?

A: The Cost of Service Study allocates service drops on Customer NCP,
recognizing that the cost of services varies with customer loads. The Company
also allocates half of Customer Service and Sales expenses to customer class
based on class energy sales. Yet, Delmarva includes all of these costs in its
estimate of customer costs for rate-design purposes. Services, and associated
costs, and half of Customer Service and Sales expenses constitute a significant
portion of the plant cost that Delmarva includes in the customer charge.

Q: What do you recommend with regard to setting of the residential customer charge?

A: The Company's proposal to increase the customer charge by 25% should be denied. Instead, the Commission should direct the Company to increase the

1		customer charge for the residential rate classes in proportion to the overall
2		revenue increase allocated to those classes.
3	В.	Winter Block Rate
4	Q:	What is the Company's proposal with regard to the declining block
5		structure in the residential winter energy rate?
6	A:	The Company proposes to reduce the current difference between the initial and
7		tail blocks by lowering the initial-block rate by 10% and commensurately
8		raising the tail-block rate.
9	Q:	Do you support the Company's proposal?
10	A:	I support the concept of reducing, and eventually eliminating, the declining
11		block structure.
12		However, I do not support the method proposed by the Company for
13		reducing the difference between the initial and tail blocks, because it
14		inappropriately eliminates the difference between the summer rate and the
15		average winter rate for large customers with average usage in excess of the
16		initial block.
17	Q:	Why should the Company's residential rate design maintain a seasonal
18		differential in energy charges?
19	A:	Seasonal rate design is consistent with generally accepted cost-causation
20		principles. Charging more for summer usage and less for winter usage may
21		provide customers with more appropriate price signals than rates that are
22		constant over the year. Shifting revenues onto the summer would increase

customers' incentive to control summer loads that determine the need for

24 distribution capacity.

23

In its *Electricity Utility Cost Allocation Manual* (1992, at 143–144), NARUC treats as non-controversial the concept of allocating distribution (and transmission) costs to seasons and time periods. Generally accepted costcausation principles call for allocating a larger share of distribution costs to high-load seasons than to low-load seasons, where feasible.

For Delmarva in particular, seasonal differentiation is justified by the 6 7 timing of peak loads and capacity limitations on the Delmarva distribution 8 system. Most of the large and expensive distribution elements—substations and 9 feeders—experience their peak loads in the summer. The Company's data indicate that 85% of its distribution feeders peak in the summer.¹⁸ A majority of 10 Delmarva's substations also peak in the summer.¹⁹ Since summer rated capacity 11 for feeders and substations is lower than winter capacity, distribution capacity is 12 13 even more strongly driven by summer loads. Hence, Delmarva's distribution rates should almost certainly be higher in summer than winter. 14

15 In fact, the Company acknowledges that a seasonal differential is 16 appropriate:

17A level of seasonal rate differentiation could be supported in distribution18energy rates on the basis that the peak loads upon which cost allocations19are based occur in the summer in the Delmarva Power & Light Maryland20Service Territory. That statement notwithstanding, the Company has not21performed any studies or analyses which would support the determination22of an appropriate level of seasonal differentiation.²⁰

¹⁸Response to OPC Data Request No. 5, Question No. 25.

¹⁹Response to OPC Data Request No. 5, Question No. 26, Attachment.

²⁰Response to OPC Data Request No. 5, Question No. 23.

Q: What do you recommend with regard to the Company's proposed
 approach for reducing the difference between the initial and tail blocks?

A: The Company's proposed method should be modified to allow for both a
reduction of the declining-block structure in the winter and an increase in the
differential between summer and average winter energy rates. Exhibit JFW-2
illustrates one approach for achieving both of these rate-design objectives.

- 7 Q: Does this conclude your testimony?
- 8 A: Yes.

Qualifications of

JONATHAN F. WALLACH

Resource Insight, Inc. 5 Water Street Arlington, Massachusetts 02476

SUMMARY OF PROFESSIONAL EXPERIENCE

- 1990– Vice President, Resource Insight, Inc. Provides research, technical assistance,
 Present and expert testimony on electric- and gas-utility planning, economics, regulation, and restructuring. Designs and assesses resource-planning strategies for regulated and competitive markets, including estimation of market prices and utility-plant stranded investment; negotiates restructuring strategies and implementation plans; assists in procurement of retail power supply.
- 1989–90 Senior Analyst, Komanoff Energy Associates. Conducted comprehensive costbenefit assessments of electric-utility power-supply and demand-side conservation resources, economic and financial analyses of independent power facilities, and analyses of utility-system excess capacity and reliability. Provided expert testimony on statistical analysis of U.S. nuclear plant operating costs and performance. Co-wrote *The Power Analyst*, software developed under contract to the New York Energy Research and Development Authority for screening the economic and financial performance of non-utility power projects.
- 1987–88 **Independent Consultant.** Provided consulting services for Komanoff Energy Associates (New York, New York), Schlissel Engineering Associates (Belmont, Massachusetts), and Energy Systems Research Group (Boston, Massachusetts).
- *1981–86* **Research Associate, Energy Systems Research Group.** Performed analyses of electric utility power supply planning scenarios. Involved in analysis and design of electric and water utility conservation programs. Developed statistical analysis of U.S. nuclear plant operating costs and performance.

EDUCATION

BA, Political Science with honors and Phi Beta Kappa, University of California, Berkeley, 1980.

Massachusetts Institute of Technology, Cambridge, Massachusetts. Physics and Political Science, 1976–1979.

PUBLICATIONS

"The Future of Utility Resource Planning: Delivering Energy Efficiency through Distributed Utilities" (with Paul Chernick), *International Association for Energy Economics Seventeenth Annual North American Conference* (460–469). Cleveland, Ohio: USAEE. 1996.

"The Price is Right: Restructuring Gain from Market Valuation of Utility Generating Assets" (with Paul Chernick), *International Association for Energy Economics Seventeenth Annual North American Conference* (345–352). Cleveland, Ohio: USAEE. 1996.

"The Future of Utility Resource Planning: Delivering Energy Efficiency through Distribution Utilities" (with Paul Chernick), *1996 Summer Study on Energy Efficiency in Buildings* 7(7.47–7.55). Washington: American Council for an Energy-Efficient Economy, 1996.

"Retrofit Economics 201: Correcting Common Errors in Demand-Side-Management Cost-Benefit Analysis" (with John Plunkett and Rachael Brailove). In proceedings of "Energy Modeling: Adapting to the New Competitive Operating Environment," conference sponsored by the Institute for Gas Technology in Atlanta in April of 1995. Des Plaines, Ill.: IGT, 1995.

"The Transfer Loss is All Transfer, No Loss" (with Paul Chernick), *Electricity Journal* 6:6 (July, 1993).

"Benefit-Cost Ratios Ignore Interclass Equity" (with Paul Chernick et al.), *DSM Quarterly*, Spring 1992.

"Consider Plant Heat Rate Fluctuations," Independent Energy, July/August 1991.

"Demand-Side Bidding: A Viable Least-Cost Resource Strategy" (with Paul Chernick and John Plunkett), *Proceedings from the NARUC Biennial Regulatory Information Conference*, September 1990.

"New Tools on the Block: Evaluating Non-Utility Supply Opportunities With *The Power* Analyst, (with John Plunkett), *Proceedings of the Fourth National Conference on Micro- computer Applications in Energy*, April 1990.

REPORTS

"Green Resource Portfolios: Development, Integration, and Evaluation" (with Paul Chernick and Richard Mazzini) report to the Green Energy Coalition presented as evidence in Ontario EB 2007-0707.

"Risk Analysis of Procurement Strategies for Residential Standard Offer Service" (with Paul Chernick, David White, and Rick Hornby) report to Maryland Office of People's Counsel. 2008. Baltimore: Maryland Office of People's Counsel.

"Integrated Portfolio Management in a Restructured Supply Market" (with Paul Chernick, William Steinhurst, Tim Woolf, Anna Sommers, and Kenji Takahashi). 2006. Columbus, Ohio: Office of the Ohio Consumers' Counsel.

"First Year of SOS Procurement." 2004. Prepared for the Maryland Office of People's Counsel.

"Energy Plan for the City of New York" (with Paul Chernick, Susan Geller, Brian Tracey, Adam Auster, and Peter Lanzalotta). 2003. New York: New York City Economic Development Corporation.

"Peak-Shaving–Demand-Response Analysis: Load Shifting by Residential Customers" (with Brian Tracey). 2003. Barnstable, Mass.: Cape Light Compact.

"Electricity Market Design: Incentives for Efficient Bidding; Opportunities for Gaming." 2002. Silver Spring, Maryland: National Association of State Consumer Advocates.

"Best Practices in Market Monitoring: A Survey of Current ISO Activities and Recommendations for Effective Market Monitoring and Mitigation in Wholesale Electricity Markets" (with Paul Peterson, Bruce Biewald, Lucy Johnston, and Etienne Gonin). 2001. Prepared for the Maryland Office of People's Counsel, Pennsylvania Office of Consumer Advocate, Delaware Division of the Public Advocate, New Jersey Division of the Ratepayer Advocate, Office of the People's Counsel of the District of Columbia.

"Comments Regarding Retail Electricity Competition." 2001. Filed by the Maryland Office of People's Counsel in U.S. FTC Docket No. V010003.

"Final Comments of the City of New York on Con Edison's Generation Divestiture Plans and Petition." 1998. Filed by the City of New York in PSC Case No. 96-E-0897.

"Response Comments of the City of New York on Vertical Market Power." 1998. Filed by the City of New York in PSC Case Nos. 96-E-0900, 96-E-0098, 96-E-0099, 96-E-0891, 96-E-0897, 96-E-0909, and 96-E-0898.

"Preliminary Comments of the City of New York on Con Edison's Generation Divestiture Plan and Petition." 1998. Filed by the City of New York in PSC Case No. 96-E-0897.

"Maryland Office of People's Counsel's Comments in Response to the Applicants' June 5, 1998 Letter." 1998. Filed by the Maryland Office of People's Counsel in PSC Docket No. EC97-46-000.

"Economic Feasibility Analysis and Preliminary Business Plan for a Pennsylvania Consumer's Energy Cooperative" (with John Plunkett et al.). 1997. 3 vols. Philadelphia, Penn.: Energy Coordinating Agency of Philadelphia.

"Good Money After Bad" (with Charles Komanoff and Rachel Brailove). 1997. White Plains, N.Y.: Pace University School of Law Center for Environmental Studies.

"Maryland Office of People's Counsel's Comments on Staff Restructuring Report: Case No. 8738." 1997. Filed by the Maryland Office of People's Counsel in PSC Case No. 8738.

"Protest and Request for Hearing of Maryland Office of People's Counsel." 1997. Filed by the Maryland Office of People's Counsel in PSC Docket Nos. EC97-46-000, ER97-4050-000, and ER97-4051-000.

"Restructuring the Electric Utilities of Maryland: Protecting and Advancing Consumer Interests" (with Paul Chernick, Susan Geller, John Plunkett, Roger Colton, Peter Bradford, Bruce Biewald, and David Wise). 1997. Baltimore, Maryland: Maryland Office of People's Counsel. "Comments of the New Hampshire Office of Consumer Advocate on Restructuring New Hampshire's Electric-Utility Industry" (with Bruce Biewald and Paul Chernick). 1996. Concord, N.H.: NH OCA.

"Estimation of Market Value, Stranded Investment, and Restructuring Gains for Major Massachusetts Utilities" (with Paul Chernick, Susan Geller, Rachel Brailove, and Adam Auster). 1996. On behalf of the Massachusetts Attorney General (Boston).

"Report on Entergy's 1995 Integrated Resource Plan." 1996. On behalf of the Alliance for Affordable Energy (New Orleans).

"Preliminary Review of Entergy's 1995 Integrated Resource Plan." 1995. On behalf of the Alliance for Affordable Energy (New Orleans).

"Comments on NOPSI and LP&L's Motion to Modify Certain DSM Programs." 1995. On behalf of the Alliance for Affordable Energy (New Orleans).

"Demand-Side Management Technical Market Potential Progress Report." 1993. On behalf of the Legal Environmental Assistance Foundation (Tallahassee)

"Technical Information." 1993. Appendix to "Energy Efficiency Down to Details: A Response to the Director General of Electricity Supply's Request for Comments on Energy Efficiency Performance Standards" (UK). On behalf of the Foundation for International Environmental Law and Development and the Conservation Law Foundation (Boston).

"Integrating Demand Management into Utility Resource Planning: An Overview." 1993. Vol. 1 of "From Here to Efficiency: Securing Demand-Management Resources" (with Paul Chernick and John Plunkett). Harrisburg, Pa.:Pennsylvania Energy Office

"Making Efficient Markets." 1993. Vol. 2 of "From Here to Efficiency: Securing Demand-Management Resources" (with Paul Chernick and John Plunkett). Harrisburg, Pa.: Pennsylvania Energy Office.

"Analysis Findings, Conclusions, and Recommendations." 1992. Vol. 1 of "Correcting the Imbalance of Power: Report on Integrated Resource Planning for Ontario Hydro" (with Paul Chernick and John Plunkett).

"Demand-Management Programs: Targets and Strategies." 1992. Vol. 1 of "Building Ontario Hydro's Conservation Power Plant" (with John Plunkett, James Peters, and Blair Hamilton).

"Review of the Elizabethtown Gas Company's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick, John Plunkett, James Peters, Susan Geller, Blair Hamilton, and Andrew Shapiro). 1992. Report to the New Jersey Department of Public Advocate.

"Comments of Public Interest Intervenors on the 1993–1994 Annual and Long-Range Demand-Side Management and Integrated Resource Plans of New York Electric Utilities" (with Ken Keating et al.) 1992.

"Review of Jersey Central Power & Light's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick et al.). 1992. Report to the New Jersey Department of Public Advocate.

"Review of Rockland Electric Company's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick et al.). 1992.

"Initial Review of Ontario Hydro's Demand-Supply Plan Update" (with David Argue et al.). 1992.

"Comments on the Utility Responses to Commission's November 27, 1990 Order and Proposed Revisions to the 1991–1992 Annual and Long Range Demand Side Management Plans" (with John Plunkett et al.). 1991.

"Comments on the 1991–1992 Annual and Long Range Demand-Side-Management Plans of the Major Electric Utilities" (with John Plunkett et al.). Filed in NY PSC Case No. 28223 in re New York utilities' DSM plans. 1990.

"Profitability Assessment of Packaged Cogeneration Systems in the New York City Area." 1989. Principal investigator.

"Statistical Analysis of U.S. Nuclear Plant Capacity Factors, Operation and Maintenance Costs, and Capital Additions." 1989.

"The Economics of Completing and Operating the Vogtle Generating Facility." 1985. ESRG Study No. 85-51A.

"Generating Plant Operating Performance Standards Report No. 2: Review of Nuclear Plant Capacity Factor Performance and Projections for the Palo Verde Nuclear Generating Facility." 1985. ESRG Study No. 85-22/2.

"Cost-Benefit Analysis of the Cancellation of Commonwealth Edison Company's Braidwood Nuclear Generating Station." 1984. ESRG Study No. 83-87.

"The Economics of Seabrook 1 from the Perspective of the Three Maine Co-owners." 1984. ESRG Study No. 84-38.

"An Evaluation of the Testimony and Exhibit (RCB-2) of Dr. Robert C. Bushnell Concerning the Capital Cost of Fermi 2." 1984. ESRG Study No. 84-30.

"Electric Rate Consequences of Cancellation of the Midland Nuclear Power Plant." 1984. ESRG Study No. 83-81.

"Power Planning in Kentucky: Assessing Issues and Choices—Project Summary Report to the Public Service Commission." 1984. ESRG Study No. 83-51.

"Electric Rate Consequences of Retiring the Robinson 2 Nuclear Plant." 1984. ESRG Study No. 83-10.

"Power Planning in Kentucky: Assessing Issues and Choices—Conservation as a Planning Option." 1983. ESRG Study No. 83-51/TR III.

"Electricity and Gas Savings from Expanded Public Service Electric and Gas Company Conservation Programs." 1983. ESRG Study No. 82-43/2.

"Long Island Without the Shoreham Power Plant: Electricity Cost and System Planning Consequences; Summary of Findings." 1983. ESRG Study No. 83-14S.

"Long Island Without the Shoreham Power Plant: Electricity Cost and System Planning Consequences; Technical Report B—Shoreham Operations and Costs." 1983. ESRG Study No. 83-14B.

"Customer Programs to Moderate Demand Growth on the Arizona Public Service Company System: Identifying Additional Cost-Effective Program Options." 1982. ESRG Study No. 82-14C.

"The Economics of Alternative Space and Water Heating Systems in New Construction in the Jersey Central Power and Light Service Area, A Report to the Public Advocate." 1982. ESRG Study No. 82-31.

"Review of the Kentucky-American Water Company Capacity Expansion Program, A Report to the Kentucky Public Service Commission." 1982. ESRG Study No. 82-45.

"Long Range Forecast of Sierra Pacific Power Company Electric Energy Requirements and Peak Demands, A Report to the Public Service Commission of Nevada." 1982. ESRG Study No. 81-42B.

"Utility Promotion of Residential Customer Conservation, A Report to Massachusetts Public Interest Research Group." 1981. ESRG Study No. 81-47

PRESENTATIONS

"Office of People's Counsel Case No. 9117" (with William Fields). Presentation to the Maryland Public Utilities Commission in Case No. 9117, December 2008.

"Electricity Market Design: Incentives for Efficient Bidding, Opportunities for Gaming." NASUCA Northeast Market Seminar, Albany, N.Y., February 2001.

"Direct Access Implementation: The California Experience." Presentation to the Maryland Restructuring Technical Implementation Group on behalf of the Maryland Office of People's Counsel. June 1998.

"Reflecting Market Expectations in Estimates of Stranded Costs," speaker, and workshop moderator of "Effectively Valuing Assets and Calculating Stranded Costs." Conference sponsored by International Business Communications, Washington, D.C., June 1997.

EXPERT TESTIMONY

- 1989 Mass. DPU on behalf of the Massachusetts Executive Office of Energy Resources. Docket No. 89-100. Joint testimony with Paul Chernick relating to statistical analysis of U.S. nuclear-plant capacity factors, operation and maintenance costs, and capital additions; and to projections of capacity factor, O&M, and capital additions for the Pilgrim nuclear plant.
- 1994 **NY PSC** on behalf of the Pace Energy Project, Natural Resources Defense Council, and Citizen's Advisory Panel. Case No. 93-E-1123. Joint testimony with John Plunkett critiques proposed modifications to Long Island Lighting Company's DSM programs from the perspective of least-cost-planning principles.
- 1994 Vt. PSB on behalf of the Vermont Department of Public Service. Docket No. 5270-CV-1 and 5270-CV-3. Testimony and rebuttal testimony discusses rate and bill effects from DSM spending and sponsors load shapes for measure- and program-screening analyses.
- 1996 New Orleans City Council on behalf of the Alliance for Affordable Energy. Docket Nos. UD-92-2A, UD-92-2B, and UD-95-1. Rates, charges, and integrated resource planning for Louisiana Power & Lights and New Orleans Public Service, Inc.
- 1996 New Orleans City Council Docket Nos. UD-92-2A, UD-92-2B, and UD-95-1. Rates, charges, and integrated resource planning for Louisiana Power & Lights and New Orleans Public Service, Inc.; Alliance for Affordable Energy. April, 1996.

Prudence of utilities' IRP decisions; costs of utilities' failure to follow City Council directives; possible cost disallowances and penalties; survey of penalties for similar failures in other jurisdictions.

1998 Massachusetts Department of Telecommunications and Energy Docket No. 97-111, Commonwealth Energy proposed restructuring; Cape Cod Light Compact. Joint testimony with Paul Chernick, January, 1998.

Critique of proposed restructuring plan filed to satisfy requirements of the electric-utility restructuring act of 1997. Failure of the plan to foster competition and promote the public interest.

Massachusetts Department of Telecommunications and Energy Docket No. 97-120, Western Massachusetts Electric Company proposed restructuring; Massachusetts Attorney General. Joint testimony with Paul Chernick, October, 1998. Joint surrebuttal with Paul Chernick, January, 1999.

Market value of the three Millstone nuclear units under varying assumptions of plant performance and market prices. Independent forecast of wholesale market prices. Value of Pilgrim and TMI-1 asset sales.

Maryland PSC Case No. 8795, Delmarva Power & Light comprehensive restructuring agreement, Maryland Office of People's Counsel. July 1999.

Support of proposed comprehensive restructuring settlement agreement

Maryland PSC Case Nos. 8794 and 8808, Baltimore Gas & Electric Company comprehensive restructuring agreement, Maryland Office of People's Counsel. Initial Testimony July 1999; Reply Testimony August 1999; Surrebuttal Testimony August 1999.

Support of proposed comprehensive restructuring settlement agreement

Maryland PSC Case No. 8797, comprehensive restructuring agreement for Potomac Edison Company, Maryland Office of People's Counsel. October 1999.

Support of proposed comprehensive restructuring settlement agreement

Connecticut DPUC Docket No. 99-03-35, United Illuminating standard offer, Connecticut Office of Consumer Counsel. November 1999.

Reasonableness of proposed revisions to standard-offer-supply energy costs. Implications of revisions for other elements of proposed settlement.

2000 **U.S. FERC** Docket No. RT01-02-000, Order No. 2000 compliance filing, Joint Consumer Advocates intervenors. Affidavit, November 2000.

Evaluation of innovative rate proposal by PJM transmission owners.

2001 **Maryland PSC** Case No. 8852, Charges for electricity-supplier services for Potomac Electric Power Company, Maryland Office of People's Counsel. March 2001.

Reasonableness of proposed fees for electricity-supplier services.

Maryland PSC Case No. 8890, Merger of Potomac Electric Power Company and Delmarva Power and Light Company, Maryland Office of People's Counsel. September 2001; surrebuttal, October 2001. In support of settlement: Supplemental, December 2001; rejoinder, January 2002.

Costs and benefits to ratepayers. Assessment of public interest.

Maryland PSC Case No. 8796, Potomac Electric Power Company stranded costs and rates, Maryland Office of People's Counsel. December 2001; surrebuttal, February 2002.

Allocation of benefits from sale of generation assets and power-purchase contracts.

2002 **Maryland PSC** Case No. 8908, Maryland electric utilities' standard offer and supply procurement, Maryland Office of People's Counsel. Direct, November 2002; Rebuttal December 2002.

Benefits of proposed settlement to ratepayers. Standard-offer service. Procurement of supply.

2003 **Maryland PSC** Case No. 8980, adequacy of capacity in restructured electricity markets; Maryland Office of People's Counsel. Direct, December 2003; Reply December 2003.

> Purpose of capacity-adequacy requirements. PJM capacity rules and practices. Implications of various restructuring proposals for system reliability.

2004 **Maryland PSC** Case No. 8995, Potomac Electric Power Company recovery of generation-related uncollectibles; Maryland Office of People's Counsel. Direct, March 2004; Supplemental March 2004, Surrebuttal April 2004.

Calculation and allocation of costs. Effect on administrative charge pursuant to settlement.

Maryland PSC Case No. 8994, Delmarva Power & Light recovery of generation-related uncollectibles; Maryland Office of People's Counsel. Direct, March 2004; Supplemental April 2004.

Calculation and allocation of costs. Effect on administrative charge pursuant to settlement.

Maryland PSC Case No. 8985, Southern Maryland Electric Coop standard-offer service; Maryland Office of People's Counsel. Direct, July 2004.

Reasonableness and risks of resource-procurement plan.

2005 **FERC** Docket No. ER05-428-000, revisions to ICAP demand curves; City of New York. Statement, March 2005.

Net-revenue offset to cost of new capacity. Winter-summer adjustment factor. Market power and in-City ICAP price trends.

FERC Docket No. PL05-7-000, capacity markets in PJM; Maryland Office of People's Counsel. Statement, June 2005.

Inefficiencies and risks associated with use of administratively determined demand curve. Incompatibility of four-year procurement plan with Maryland standard-offer service.

FERC Dockets Nos. ER05-1410-000 & EL05-148-000, proposed marketclearing mechanism for capacity markets in PJM; Coalition of Consumers for Reliability, Affidavit October 2005, Supplemental Affidavit October 2006.

Inefficiencies and risks associated with use of administratively determined demand curve. Effect of proposed reliability-pricing model on capacity costs.

2006 **Maryland PSC** Case No. 9052, Baltimore Gas & Electric rates and markettransition plan; Maryland Office of People's Counsel, February 2006. Transition to market-based residential rates. Price volatility, bill complexity, and cost-deferral mechanisms.

Maryland PSC Case No. 9056, default service for commercial and industrial customers; Maryland Office of People's Counsel, April 2006.

Assessment of proposals to modify default service for commercial and industrial customers.

Maryland PSC Case No. 9054, merger of Constellation Energy Group and FPL Group; Maryland Office of People's Counsel, June 2006.

Assessment of effects and risks of proposed merger on ratepayers.

Illinois Commerce Commission Docket No. 06-0411, Commonwealth Edison Company residential rate plan; Citizens Utility Board, Cook County State's Attorney's Office, and City of Chicago, Direct July 2006, Reply August 2006.

Transition to market-based rates. Securitization of power costs. Rate of return on deferred assets.

Maryland PSC Case No. 9064, default service for residential and small commercial customers ; Maryland Office of People's Counsel, Rebuttal Testimony, September 2006.

Procurement of standard-offer power. Structure and format of bidding. Risk and cost recovery.

FERC Dockets Nos. ER05-1410-000 & EL05-148-000, proposed marketclearing mechanism for capacity markets in PJM; Maryland Office of the People's Counsel, Supplemental Affidavit October 2006.

Distorting effects of proposed reliability-pricing model on clearing prices. Economically efficient alternative treatment.

Maryland PSC Case No. 9063, optimal structure of electric industry; Maryland Office of People's Counsel, Direct Testimony, October 2006; Rebuttal November 2006; surrebuttal November 2006.

Procurement of standard-offer power. Risk and gas-price volatility, and their effect on prices and market performance. Alternative procurement strategies.

Maryland PSC Case No. 9073, stranded costs from electric-industry restructuring; Maryland Office of People's Counsel, Direct Testimony, December 2006.

Review of estimates of stranded costs for Baltimore Gas & Electric.

2007 **Maryland PSC** Case No. 9091, rates and rate mechanisms for the Potomac Edison Company; Maryland Office of People's Counsel, Direct Testimony, March 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Maryland PSC Case No. 9092, rates and rate mechanisms for the Potomac Electric Power Company; Maryland Office of People's Counsel, Direct Testimony, March 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Maryland PSC Case No. 9093, rates and rate mechanisms for Delmarva Power & Light; Maryland Office of People's Counsel, Direct Testimony, March 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Maryland PSC Case No. 9099, rates and rate mechanisms for Baltimore Gas & Electric; Maryland Office of People's Counsel, Direct, March 2007; Surrebuttal April 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Connecticut DPUC Docket No. 07-04-24, review of capacity contracts under Energy Independence Act; Connecticut Office of Consumer Counsel, Joint Direct Testimony June 2007.

Assessment of proposed capacity contracts.

Maryland PSC Case No. 9117, residential and small-commercial standard-offer service; Maryland Office of People's Counsel. Direct and Reply, September 2007; Supplemental Reply, November 2007; Additional Reply, December 2007; presentation, December 2008.

Benefits of long-term planning and procurement. Proposed aggregation of customers.

Maryland PSC Case No. 9117, Phase II, residential and small-commercial standard-offer service; Maryland Office of People's Counsel. Direct, October 2007.

Energy efficiency as part of standard-offer-service planning and procurement. Procurement of generation or long-term contracts to meet reliability needs.

2008 **Connecticut DPUC 08-01-01**, peaking generation projects; Connecticut Office of Consumer Counsel. Direct (with Paul Chernick), April 2008.

Assessment of proposed peaking projects. Valuation of peaking capacity. Modeling of energy margin, forward reserves, other project benefits.

Ontario EB-2007-0707, Ontario Power Authority integrated system plan; Green Energy Coalition, Penimba Institute, and Ontario Sustainable Energy Association. Evidence (with Paul Chernick and Richard Mazzini), August 2008.

Critique of integrated system plan. Resource cost and characteristics; finance cost. Development of least-cost green-energy portfolio.

TABLE 1 Allocation of Operating Income Based on Per Books Cost of Service Study Results

		TOTAL MARYLAND RETAIL		RESIDENTIAL	GENERAL SERV SECONDARY		GENERAL SERV SECONDARY	GENERAL SERV PRIMARY SMALL	STREET LIGHTING SERVICE	
1 2	Cost of Service Study Results (Schedule EPT-3) Distribution Revenue			RESIDENTIAL	SMALL	SERVICE	LARGE	SMALL	SERVICE	
3	Distribution, Franchise Tax and USP Other Revenue	\$ 119,267,408 \$ 1,559,597	\$ \$	76,881,603	\$ 28,017,024 \$ \$ 276 149 \$	173,921 \$ 545 \$	5,278,532 \$ 74,528 \$	5,667,121 \$ 60,241 \$	3,249,208 38 449	
5	Total	\$ 120,827,004	\$	77,991,287	\$ 28,293,173 \$	174,466 \$	5,353,059 \$	5,727,362 \$	3,287,657	
6	Operating Income	\$ 22,455,581	\$	14,569,006	\$ 6,111,600 \$	14,526 \$	785,465 \$	501,889 \$	473,095	
7	Distribution Rate Base	\$ 286,643,710	\$	176,756,632	\$ 64,594,164 \$	200,491 \$	18,588,978 \$	16,471,488 \$	10,031,956	
8	ROR	7.83%		8.24%	9.46%	7.25%	4.23%	3.05%	4.72%	
9	Unitized ROR	1.00		1.05	1.21	0.92	0.54	0.39	0.60	
10	Revenue Requirements Results (Schedule WMV-2)	A (A A B A A A A A A A A A A	•				- 10 - 00 - (
11	Operating Income	\$ 18,373,864	\$	11,920,820	\$ 5,000,704 \$	11,886 \$	642,692 \$	410,661 \$	387,101	
12		\$ 310,364,908 5.02%	φ	191,384,126	\$ 69,939,654 \$ 7 15%	217,082 \$ 5.49%	20,127,309 \$	17,834,586 \$	10,862,151	
14	Unitized ROR	1.00		1.05	1.21	0.92	0.54	0.39	0.60	
TABLE 2	Cost of Service Class Revenue Increase Allocation									
15	Revenue Requirement (Schedule WMV-2)	14.145.175								
16	Operating Income Deficiency (Schedule WMV-2)	8,255,445								
17	ROR (Schedule WMV-2)	8.58%								
		TOTAL			GENERAL SERV		GENERAL SERV	GENERAL SERV	STREET	
		MARYLAND			SECONDARY	CABLE	SECONDARY	PRIMARY	LIGHTING	GENERAL SERV
10	Proposed Revenue Allocation	RETAIL		RESIDENTIAL	SMALL	SERVICE	LARGE	SMALL	SERVICE	TRANSMISSION
18				1.00	1.00	1.00	1.00	1.00	1.00	
20	ROR	8 58%		8 58%	8.58%	8 58%	8.58%	8.58%	8.58%	
21	Incremental Income	\$ 8.255.445	\$	4.499.938	\$ 1.000.119 \$	6.740 \$	1.084.231 \$	1,119,546 \$	544.872	
22	Revenue Conversion Factor	1.7134	Ŷ	1.7134	1.7134	1.7134	1.7134	1.7134	1.7134	
23	Revenue Requirement	\$ 14,145,175	\$	7,710,355	\$ 1,713,639 \$	11,548 \$	1,857,760 \$	1,918,270 \$	933,602	\$-
24	Final Unitized ROR	1.00		1.00	1.00	1.00	1.00	1.00	1.00	
				-0.05	-0.21	0.08	0.46	0.61	0.40	
TABLE 3	Rate Schedule Specific Revenue Increase Allocation									
25	Cost of Service Classification			RESIDEN	ITIAL	GENERAL	SERV SECONDARY	SMALL CA	BLE SERVICE	
26	Rate Schedule	Total		R	RTOU-ND	SGS-S	GS-SH	GS-WH	TN	
27	Annualized Current Distribution Revenue (Schedule JFJ-7)	\$ 114,370,358	\$	75,148,657	\$ 44,443 \$	24,717,019 \$	1,122,322 \$	2,084 \$	173,897	
28	Revenue Change (\$)	\$ 14,145,175	\$	7,705,798	\$ 4,557 \$	1,639,075 \$	74,425 \$	138 \$	11,548	
29	Proposed Revenue	\$ 128,515,533	\$	82,854,454	\$ 49,001 \$	26,356,094 \$	1,196,748 \$	2,223 \$	185,445	
30	Revenue Change based on Annualized Current Revenue (%)	12.4%		10.3%	10.3%	6.6%	6.6%	6.6%	6.6%	
31	Cost of Service Classification						STREET LIGHTIN	<u>G SERVICE</u>		
32	Rate Schedule			LGS-S	GS-P	GS-T	OL	ORL		
33	Annualized Current Distribution Revenue (Schedule JFJ-7)		\$	4,848,072	\$ 5,076,873 \$	3,743	\$3,165,918 \$	67,330		
34	Revenue Change (\$)		\$	1,857,760	<u>5 1,918,270 \$</u>	- \$	914,161 \$	19,441		
35	Proposea Revenue		\$	6,705,832	\$ 6,995,144 \$	3,743 \$	4,080,079 \$	86,771		
36	Revenue Change based on Annualized Current Revenue (%)			38.3%	37.8%	0.0%	28.9%	28.9%		

Delmarva Power & Light Company - Maryland Development of Service Classification Distribution Rates Using Twelve Months Ending December 2008 Data

Service Classification Residential ("R")

1	Distribution Functional Revenue Requirements Total	\$ 82,854,454
2	Proposed Customer Charge Recovery	\$ 13,677,348

2	Proposed	Customer	Charge	Recovery		
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3	Proposed	Demand/Energy Charge Recovery	\$	69,177,106
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4 Delivery Service	Billing Determinants	Current Distribution Rate		Effective Annualized BSA Rate (See Note 1)		Present Revenue	F	Preliminary Rate	1	Firs Adju	Winter t Block stment Factor 0%		Proposed Rate		Proposed Revenue		Revenue Change	Base Rate Change %
5 Monthly Customer Charge	2,067,550 \$	6.00			\$	12,405,300	\$	6.62	\$	-		\$	6.62	\$	13,677,348	\$	1,272,048	10.25%
6 Distribution 7 Summer Energy Rate	719,478,722 \$	0.027741	\$	0.002198	\$	21,540,228	\$	0.035121	\$	-		\$	0.035121	\$	25,268,812	\$	3,728,584	26.60%
 Winter First Block Energy Rate Winter Second Block Energy Rate 	924,749,333 \$ 456,740,761 \$	0.031293 0.020206	\$ \$	0.002198 0.002198	\$ \$	30,970,465 10,232,664	\$ \$	0.034501 0.026282	\$	-		\$ \$	0.034501 0.026282	\$ \$	31,904,344 12,004,061	\$ \$	933,880 1,771,396	10.25% 30.07%
10 Total Delivery Service	2,100,968,816 \$	0.033571			\$	75,148,657						\$	0.039436	\$	82,854,566	\$	7,705,909	17.47%
11 Rounding Difference														\$	111			

Note 1 The "Effective Annualized BSA Rate" is determined by dividing the difference between allowed test year revenue and the revenue calculated using current rates and billing determinants divided by the service classification appropriate billing determinant for BSA Development.

Attachment 1

- 1. Response to OPC Data Request No. 5, Question No. 9.
- 2. Response to OPC Data Request No. 5, Question No. 11.
- 3. Response to OPC Data Request No. 9, Question No. 1.
- 4. Response to OPC Data Request No. 5, Question No. 6.
- 5. Response to OPC Data Request No. 5, Question No. 7.
- 6. Response to OPC Data Request No. 5, Question No. 25.
- 7. Response to OPC Data Request No. 5, Question No. 26.
- 8. Response to OPC Data Request No. 5, Question No. 23.

QUESTION NO.:9

Q. PLEASE PROVIDE THE BASIS FOR THE 50/50 WEIGHTING OF CLASS NCP AND CUSTOMER MAXIMUM DEMANDS USED IN THE ALLOCATION OF (1) LINE TRANSFORMERS, AND (2) SECONDARY PLANT COSTS. PLEASE PROVIDE ALL ANALYSES, STUDIES OF LOAD DIVERSITY, WORKPAPERS, OR ELECTRONIC SPREADSHEETS RELIED ON TO SUPPORT ADOPTION OF THE 50/50 WEIGHTING FOR THESE ALLOCATORS.

RESPONSE:

A. The 50/50 weighting of the class maximum diversified demand and the undiversified sum of the customer maximum demands to allocate distribution line transformers and secondary conductors is consistent with the method approved in Case No. 9093, and represents a reasonable and equitable approach to allocating these plant investments.

Distribution line transformers are allocated using the average of the two demand levels to recognize that transformers may serve multiple customers so that the diversity of load will impact the sizing of the transformer; while other transformers serve a single customer so no load diversity is considered in sizing the transformer. For example, the cost of service study recognizes this latter point by allocating transformers to the large secondary customers based on the sum of the customer maximum demands only.

Secondary conductors originate at the low-voltage side of the distribution transformer and can extend to a customer's service connection to the network from a service drop. Like line transformers, these conductor segments will deliver diversified loads to various customers served off a single conductor and should reflect a consistent allocation approach.

SPONSOR: Elliott P. Tanos

QUESTION NO.:11

Q. PLEASE PROVIDE THE COMPANY'S STUDY OF LOAD DIVERSITY ON SECONDARY DISTRIBUTION LINES AND LINE TRANSFORMERS.

RESPONSE:

A. Please refer to the response to Staff Data Request No. 6, Question No.13 for the Company's demand analysis. There is no separate study of load diversity available.

SPONSOR: Elliott P. Tanos

2.

QUESTION NO. :1

Q. PLEASE PROVIDE THE NUMBER OF SECONDARY TRANSFORMERS IN THE MARYLAND JURISDICTION IN THE 12-MONTH PERIOD ENDING DECEMBER 31, 2008.

RESPONSE:

A. 59,097.

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SPONSOR: Elliott Tanos

QUESTION NO. :6

Q. PLEASE PROVIDE AN ESTIMATE OF THE PERCENTAGE OF RESIDENTIAL CUSTOMERS THAT LIVE IN MULTIFAMILY DWELLINGS.

RESPONSE:

A. The Company does not keep track of the requested information

SPONSOR: Elliott P. Tanos

QUESTION NO.:7

Q. FOR THE RESIDENTIAL RATE CLASS, PLEASE PROVIDE THE AVERAGE NUMBER OF CUSTOMERS PER SERVICE.

RESPONSE:

A. Please refer to the Company's Cost of Service Study, Schedule EPT-5, page 19-1 for the Average Number of Residential Customers. The number of services is not maintained by the Company. Please refer to the response to OPC Data Request No. 5-8.

SPONSOR: Elliott P. Tanos

QUESTION NO. :25

Q. PLEASE SPECIFY THE PERCENTAGE OF FEEDERS THAT PEAK IN THE SUMMER AND THE PERCENTAGE THAT PEAK IN THE WINTER.

RESPONSE:

A. The percentage of feeders that peak in the summer is approximately 85%. The percentage of feeders that peak in the winter is approximately 15%.

SPONSOR: William M. Gausman

2

QUESTION NO. :26

Q. PLEASE PROVIDE THE SUMMER AND WINTER PEAKS ON DELMARVA'S SUBSTATIONS.

RESPONSE:

A. Please refer to the attached listing of summer and winter peaks on the Company's Maryland substations.

SPONSOR: William M. Gausman

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DPL MARYLAND SUBSTATIONS	Summer	Winter Peak
138TH STREET	51.8	49.1
ANDORA	26	
	3.6	
BOHEMIA	2.0	
BOTEMIA	12.0	11.5
	12.4	N/A
	27.4	22.9
	27.4	22.0
CATHERS	3.4	
	2.5	N/A
	3.2	N/A
	112.4	99.5
CENTREVILLE	18.3	20.9
CHARLES	3.2	N/A
CHESAPEAKE CITY	1.6	N/A
CHESAPEAKE	15.2	N/A
CHES-PLY	1.9	1.9
CHESTERTOWN	35.0	32.5
CHURCH HILL	0.0	1.4
CHURCH	14.8	15.1
COLORA	101.5	93.8
COWLANE	0.8	N/A
CRISFIELD 12 kV	13.0	10.0
CRISFIELD 25 kV	3.6	3.2
CULVER	21.0	N/A
DARLINGTON	1.3	N/A
DUBLIN	2.5	N/A
EAST NEW MKT	5.2	4.5
EASTON	5.5	4.1
ELKNECK	0.4	N/A
ELKTON	7.8	N/A
FOUNDRY	1.7	N/A
FRUITLAND	45.5	46.5
GALLION	2.5	N/A
GILPIN	2.1	N/A
GLEN	1.7	N/A
GRACE STREET	16.5	20.7
GRASONVILLE	28.8	38.2
GREENBANK	1.2	N/A
HANCES	1.5	N/A
HARFORD	32	N/A
HARRIS	0.8	N/A
HERRON	4.8	NI/A
HILLSBORD	22.4	24.2
HUDSON	10	NI/A
	1.0	
	0.1	
	10.1	
	10.4	N/A
	0.5	IN/A
	30.9	N/A
	2.1	N/A
	2.8	N/A
LYNCH	10.1	9.7
MACION	3.8	N/A
MARIDEL	29.0	21.0
MASSEY	6.9	6.4
MCCLEANS	2.8	2.4

DPL MARTLAND SUBSTATIONS Peak Peak MECHANICS 2.6 N/A MIDDLE 2.8 N/A MT. HERMON 72.8 76.9 N. CHESTERTOWN 3.4 2.4 N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN CITY 26.5 18.3 OCEAN CITY 26.6 28.5 PERCH 1.7 N/A PERSEGO 1.3 N/A PERCH 1.7 N/A PERCH 1.7 N/A PORTERS BRIDGE 1.4 N/A PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A ROCMAKE 1.4 N/A RAILROAD 2.3 N/A ROCK HALL 1.4 N/A <tr< th=""><th></th><th>Summer</th><th>Winter</th></tr<>		Summer	Winter
MECHANICS 2.6 N/A MIDDLE 2.8 N/A MT. HERMON 72.8 76.9 N. CHESTERTOWN 3.4 2.4 N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN DAY 42.1 37.4 OCEAN BAY 42.1 37.4 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PERCH 1.7 N/A PERCH 1.7 N/A PERCH 1.7 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A ROCK HALL 1.4 0.6 STEC	DPL MARYLAND SUBSTATIONS	Peak	Peak
MIDDLE 2.8 N/A MT. HERMON 72.8 76.9 N. CHESTERTOWN 3.4 2.4 N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRICE 9.5 9.7 PRICE 0.4 N/A RISING SUN 4.4 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A	MECHANICS	2.6	N/A
MT. HERMON 72.8 76.9 N. CHESTERTOWN 3.4 2.4 N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A POCOMOKE 18.8 16.9 POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A RIVERSIDE 0.4 N/A STEVENSVILLE 39.2 55.0 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A <	MIDDLE	2.8	N/A
N. CHESTERTOWN 3.4 2.4 N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PERDERTON 28.6 28.6 PERCH 1.7 N/A PERCH 1.7 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A RIVERSIDE 0.4 N/A RIVERSIDE 0.4 N/A STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.0	MT. HERMON	72.8	76.9
N. SALISBURY 53.1 49.5 NESBITT 2.8 N/A NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERSTON 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A	N. CHESTERTOWN	3.4	2.4
NESBITT 2.8 N/A NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERSTON 28.6 28.5 PERCH 1.7 N/A POCOMOKE 18.8 16.9 POCOMOKE 18.8 16.9 POCOMOKE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRICE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A SUSQUEHANNA<	N. SALISBURY	53.1	49.5
NORMIRA 2.3 N/A NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRICE 9.5 9.7 PRICE 9.5 9.7 PRICE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A <td< td=""><td>NESBITT</td><td>2.8</td><td>N/A</td></td<>	NESBITT	2.8	N/A
NORTH EAST 2.3 N/A OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERCH 1.7 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A POCOMOKE 9.5 9.7 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RIVERSIDE 0.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 <td< td=""><td>NORMIRA</td><td>2.3</td><td>N/A</td></td<>	NORMIRA	2.3	N/A
OCEAN CITY 26.5 18.3 OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8	NORTH EAST	2.3	N/A
OCEAN BAY 42.1 37.4 OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 <	OCEAN CITY	26.5	18.3
OTSEGO 1.3 N/A PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRISTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WEST CAMBRIDGE 20.2 21.2	OCEAN BAY	42.1	37.4
PEMBERTON 28.6 28.5 PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A	OTSEGO	1.3	N/A
PERCH 1.7 N/A PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRICE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A	PEMBERTON	28.6	28.5
PERRYVILLE 2.3 N/A POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WODL	PERCH	1.7	N/A
POCOMOKE 18.8 16.9 PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WALNUT 1.8 19.7 TRIMPH 1.7 N/A WEST CAMBRIDGE 20.2 21.2 <t< td=""><td>PERRYVILLE</td><td>2.3</td><td>N/A</td></t<>	PERRYVILLE	2.3	N/A
PORTERS BRIDGE 1.4 N/A PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A <td< td=""><td>POCOMOKE</td><td>18.8</td><td>16.9</td></td<>	POCOMOKE	18.8	16.9
PRESTON 5.2 4.6 PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7	PORTERS BRIDGE	1.4	N/A
PRICE 9.5 9.7 PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7	PRESTON	5.2	4.6
PRINCE 1.0 N/A RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WAVERLY 0.5 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7	PRICE	9.5	9.7
RAILROAD 2.3 N/A RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7	PRINCE	1.0	N/A
RISING SUN 4.4 N/A RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	RAILROAD	2.3	N/A
RIVERSIDE 0.4 N/A ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WAVERLY 0.5 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	RISING SUN	4.4	N/A
ROCK HALL 1.4 0.6 SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	RIVERSIDE	0.4	N/A
SHARPTOWN 6.1 N/A STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	ROCK HALL	1.4	0.6
STEELE 27.7 27.4 STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	SHARPTOWN	6.1	N/A
STEVENSVILLE 39.2 55.0 STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	STEELE	27.7	27.4
STOCKTON 2.5 N/A SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	STEVENSVILLE	39.2	55.0
SUSQUEHANNA 25.0 25.4 THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	STOCKTON	2.5	N/A
THEODORE 3.6 N/A TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	SUSQUEHANNA	25.0	25.4
TODD 12kV 4.3 4.2 TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	THEODORE	3.6	N/A
TODD 25kV 20.3 20.8 TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WYE MILLS 14.6 17.7	TODD 12kV	4.3	4.2
TRAPPE 18.5 19.7 TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	TODD 25kV	20.3	20.8
TRIUMPH 1.7 N/A VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	TRAPPE	18.5	19.7
VIENNA 1.0 N/A WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	TRIUMPH	1.7	N/A
WALNUT 1.8 N/A WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	VIENNA	1.0	N/A
WAVERLY 0.5 N/A WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	WALNUT	1.8	N/A
WEST CAMBRIDGE 20.2 21.2 WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	WAVERLY	0.5	N/A
WHITEFORD 1.4 N/A WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	WEST CAMBRIDGE	20.2	21.2
WOODLAWN 1.5 N/A WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	WHITEFORD	1.4	N/A
WORCESTER 31.2 24.7 WYE MILLS 14.6 17.7	WOODLAWN	1.5	N/A
WYE MILLS 14.6 17.7	WORCESTER	31.2	24.7
	WYE MILLS	14.6	17.7

NOTES:

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The data provided represents the current base peak load of each facility and is the result of an analysis of three recent peak periods to account for abnormal operating conditions due to unplanned outages, load transfers, weather, etc. "N/A" indicates that winter peak data is not currently available for the noted substation.

QUESTION NO.:23

Q. PLEASE INDICATE WHETHER THE COMPANY BELIEVES THAT SEASONAL DIFFERENTIATION OF ENERGY CHARGES SHOULD BE RETAINED IN RESIDENTIAL RATE DESIGN. PROVIDE THE BASIS FOR THIS RESPONSE, INCLUDING SUPPORTING STUDIES. IF SO, PROVIDE THE COMPANY'S BEST ESTIMATE OF THE APPROPRIATE DIFFERENTIAL AND PROVIDE THE BASIS OF THIS ESTIMATE, INCLUDING ALL SUPPORTING STUDIES AND WORKPAPERS.

RESPONSE:

A. A level of seasonal rate differentiation could be supported in distribution energy rates on the basis that the peak loads upon which cost allocations are based occur in the summer in the Delmarva Power & Light Maryland Service Territory. That statement notwithstanding, the Company has not performed any studies or analyses which would support the determination of an appropriate level of seasonal differentiation.

SPONSOR: Joseph F. Janocha

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